

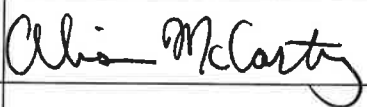

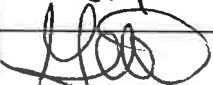

**BUREAU OF LAND MANAGEMENT
SOUTHEASTERN STATES FIELD OFFICE
411 Briarwood Drive, Suite 404
Jackson, Mississippi 39206**

ENVIRONMENTAL ASSESSMENT (EA) FORM

ES-020-2011-58

PROJECT NAME: EOI #1493, Lafourche Parish, Louisiana Lease EA

TECHNICAL REVIEW:

X	Program	Reviewer	Signature	Date
X	Air Quality	Alison McCartney Natural Resource Specialist		5/16/12
X	ACEC	Alison McCartney Natural Resource Specialist	ASM	5/16/12
X	Botanical including T&E Spp.	Alison McCartney Natural Resource Specialist	ASM	5/16/12
	Communications (Dispatch)			
X	Cultural/Paleontology	John Sullivan Archeologist		5/16/12
X	Energy Policy	Alison McCartney Natural Resource Specialist	ASM	5/16/12
X	Environmental Justice	Alison McCartney Natural Resource Specialist	ASM	5/16/12
	Farmlands (Prime & Unique)			
	Fire Management			
X	Floodplain	Alison McCartney Natural Resource Specialist	ASM	5/16/12
X	Hazardous Material	Brian Kennedy Physical Scientist		5/16/12
X	Invasive & Non-Native Spp.	Alison McCartney Natural Resource Specialist	ASN	5/16/12
	Lands/Realty			
	Land Law Examiner			
	Law Enforcement			
X	Minerals	Alison McCartney Natural Resource Specialist	ASM	5/16/12
X	Native American Religious Concerns	John Sullivan Archeologist		5/16/12
	Operations			
	Range Management			
X	Recreation	Alison McCartney Natural Resource Specialist	ASM	5/16/12

X	Soils	Alison McCartney Natural Resource Specialist	ASM	5/16/12
	Surface Protection			
	Visual Resources			
	Water Rights			
X	Water Quality (Surface & Ground)	Alison McCartney Natural Resource Specialist	ASM	5/16/12
X	Wetlands/Riparian Zones	Alison McCartney Natural Resource Specialist	ASM	5/16/12
X	Wild & Scenic Rivers	Alison McCartney Natural Resource Specialist	ASM	5/16/12
X	Wilderness	Alison McCartney Natural Resource Specialist	ASM	5/16/12
	Wild Horse & Burro			
X	Wildlife including T&E Spp.	Alison McCartney Natural Resource Specialist	ASM	5/16/12

Prepared by: Alison McCartney
Alison McCartney
Natural Resource Specialist

Date: 5/16/12

Reviewed by: Gary Taylor
Gary Taylor
NEPA Coordinator

Date: 5/16/12

Reviewed by: Duane Winters
Duane Winters
Resource Supervisor

Date: 5/14/12

Reviewed by: John Dykes
John Dykes
Minerals Supervisor

Date: 5/16/12



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Southeastern States Field Office
411 Briarwood Drive, Suite 404
Jackson, Mississippi 39206



Environmental Assessment ES-020-2011-58

EOI #1493, Lafourche Parish, Louisiana Lease EA

**Prepared by: Alison McCartney
Date: May 16, 2012**

CH 1 – PURPOSE OF AND NEED FOR THE PROPOSED ACTION

Introduction

This environmental assessment (EA) is prepared to address a proposed federal oil and gas lease nomination in Lafourche Parish, Louisiana pursuant to the Minerals Leasing Act of 1920, as amended. A federal oil and gas lease is a legal contract that grants exclusive rights to the lessee to develop federally owned oil and gas resources.

Need for the Proposed Action

The development of oil and natural gas is essential to meeting the nation's future needs for energy. Private exploration and development of federal oil and gas reserves are integral to the Bureau of Land Management's (BLM) oil and gas leasing programs under the authority of the Mineral Leasing Act 1920, as amended, the Mineral Leasing Act for Acquired Lands of 1947, as amended, the Federal Land Policy and Management Act of 1976 and the Energy Policy Act of 2005. The oil and gas leasing program managed by BLM encourages the development of domestic oil and gas reserves and reduction of U.S. dependence on foreign sources of energy. The tract considered for lease in this analysis was nominated by an Expression of Interest (EOI) from private industry.

The BLM, Southeastern States Field Office (SSFO) received a request from the BLM Eastern States Office for a National Environmental Policy Act (NEPA) analysis report on 75.48 acres of land with the following legal description: T14S, R18E, Sec. 19, S2SW, Louisiana Meridian, Lafourche Parish, Louisiana. This nomination is located on privately owned land.

Management Objectives of the Action

The objective of the proposed action is to make available for lease 75.48 acres in Lafourche Parish, Louisiana to provide exclusive rights to the lessee to develop federally owned oil and gas resources.

Land Use Plan Conformance

The proposed action does not conflict with any known State or local planning, ordinance or zoning. This area is not covered by a BLM Resource Management Plan. According to the regulations at 43 CFR 1610.8 (b) (1), however, this environmental assessment will be used as a basis for making a decision on the proposal.

Applicable Regulatory Requirements and Required Coordination

Applicable regulatory requirements and required coordination for lease development of federal oil and gas minerals is authorized by several statutes including: The Mineral Leasing Act, as amended and supplemented (30 U.S.C. 181), The Mineral Leasing Act of 1947, as amended (30 U.S.C. 351-359), The National Historic Preservation Act, The American Indian Religious

FINDING OF NO SIGNIFICANT IMPACT/DECISION RECORD

FINDING OF NO SIGNIFICANT IMPACT

Based on the analysis of potential environmental impacts contained in the attached environmental assessment (EA), I have determined that the proposed action will not have any significant impacts on the human environment and an environmental impact statement (EIS) is not required.

Bruce Dawson
Bruce Dawson
Field Manager

5-16-2012
Date

DECISION RECORD

It is my decision to authorize the offer to lease for Oil and Gas the proposed tract located in Lafourche Parish, Louisiana Meridian, Louisiana with legal description: T14S, R18E, Sec. 19, S2SW, Louisiana Meridian, Lafourche Parish, Louisiana (75.48 acres)

Rationale for Decision

The decision to allow the proposed action does not result in any undue or unnecessary environmental degradation and is consistent with the laws and regulations of the Federal, State, or local government. The proposed action was subject to a 30-day public review.

Larry Denny
DSD, Natural Resources

Date

Freedom Act, The Native American Graves Protection and Repatriation Act, E.O. 13007, and/or other statutes and executive orders.

The following agencies/tribes were contacted (Appendix C):

Louisiana State Historic Preservation Officer

Alabama Coushatta Tribe of Texas

Chitimacha Tribe of Louisiana

Coushatta Indian Tribe

Jena Band of Choctaw

Mississippi Band of Choctaw Indians

Seminole Nation of Oklahoma

Seminole Tribe of Florida

Thlopthlocco Tribal Town

Tunica-Biloxi Tribe of Louisiana

The proposed lease was subject to public review for a 30-day period per publication of a newspaper of local distribution (Appendix E).

Decision(s) That Must Be Made

There are two decisions under consideration from the BLM for the proposed action. The first is to offer the federal oil and gas mineral estate for competitive leasing. The other decision would be to deny the action so that no development and surface disturbance would take place. BLM's policy is to promote oil and gas development as long as it meets the guidelines and regulations set forth by the National Environmental Policy Act of 1969 and other subsequent laws and policies passed by the U.S. Congress.

CH 2 – ALTERNATIVES INCLUDING THE PROPOSED ACTION

Introduction

A tract of land has been nominated for a federal oil and gas lease in Lafourche Parish, Louisiana. A federal oil and gas lease is a legal contract that grants exclusive rights to the lessee to develop oil and gas resources that may exist on split estate property.

Location

Legal descriptions for the nominated parcels are:

EOI #1493 - T14S, R18E, Sec. 19, S2SW, Louisiana Meridian, Lafourche Parish, Louisiana (75.48 acres)

Proposed Action

The BLM, SSFO has received a nomination or EOI, to lease 75.48 acres of federal mineral estate for oil and gas development in Lafourche Parish, Louisiana. This lease would give the lessee

exclusive rights to explore and develop oil and gas reserves on the lease, but does not in itself authorize surface disturbing activities. This competitive lease provides exclusive rights to develop the federal oil and gas resources, but does not obligate the company to drill a well on the federal mineral estate. The lease can be used to consolidate acreage to meet well spacing requirements, and/or the mineral estate may be acquired for speculative value. The BLM will require applicants to adhere to stipulations and lease notices/best management practices for gas wells (Appendix B). The attached stipulations and lease notices/best management practices have been formulated while conducting our impact analysis and are made part of the proposed action.

The proposed nominations, if approved, would be offered for competitive sale with stipulations and notices generated through this and other consultations, as well as the National Environmental Policy Act (NEPA) process. Once awarded, the successful bidder is required to submit an Application for Permit to Drill (APD) to the BLM before any ground disturbance is authorized. In the APD, the company identifies a proposed drill site and provides the BLM with specific details on how and when they propose to drill the well within the constraints of the lease document. Upon receipt of an APD, BLM conducts an onsite inspection with the company, and when possible the private land owner or surface managing agency. NEPA and the Endangered Species Act (ESA) requirements must also be met at the APD stage and in those cases where there is the potential to affect federally or state-listed species, a site specific biological assessment is written, including the results of any biological surveys that may be indicated. This is submitted to U.S. Fish and Wildlife Service and/or the state wildlife agency for consultation, as appropriate. The lessee is required, as per lease stipulations, to comply with the recommendations of these consultations.

Typically, after approval of an APD, the petroleum industry follows a general plan and process for all proposed drill sites, as follows:

Spacing for the tract will be 40 acres per well. Preparation for the drilling process includes construction of a road, drilling pad, and reserve pit. Constructed access roads normally have a running surface width of approximately 30 feet; the length is dependent upon the well site location in relation to existing roads or highways. The average length of road construction will be about 0.5 miles. Therefore, about 2 acres would be affected by road construction. Typically 2.5 acres are cleared and graded level for the construction of the drilling pad for a well. If the well is gas and productive, and the flowline is in the road, we can estimate that another 0.5 acres may be affected by flowline construction. The total disturbed area for drilling a productive well will be approximately 5 acres. These disturbances are typical for private or Federal Ownership well locations. The excavation reserve pit is usually about five feet deep and is lined with bentonite clay to retain drilling fluids, circulated mud, and cuttings. Plastic or butyl liners (or its equivalent), that meet state standards for thickness and quality, are used on occasions when soils are determined incapable of holding pit fluids.

Because of the cost of the drilling rig, drilling usually continues around the clock. Wells in this area are usually drilled in 30 days. Once drilling is completed, excess fluids are pumped out of the pit and disposed of in a state authorized disposal site and the cuttings are buried. Wells would be drilled by rotary drilling using mud as the circulating medium. Mud pumps would be used to force mud down the drillpipe, thereby forcing the rock cuttings out the wellbore. Water would

normally be from a well drilled on the site, however, water could be pumped to the site from a local pond, stream or lake through a pipe laid on the surface. Approximately 1500 barrels of drilling mud would be typically kept on the location. If a tract is adjacent to a producing field and water production will be expected during the life of the field, separation, dehydration and other production processing may be necessary. Construction of facilities off the Federal lease may be needed to handle this processing. Some processing or temporary storage may be necessary on site.

During well pad construction, the topsoil is stockpiled to be used during restoration activities. If the well is successful, the drill pad would be reduced to about 100' x 100' with the remaining surface area, including the reserve pit, re-graded and restored as per the BLM and surface owner requirements. A lease notice in these proposed leases encourages the use of non-invasive cover plants during all restoration and stabilization activities. Final seed mixtures and plantings are determined with recommendations from BLM with approval of the land owner. The remaining 100' x 100' pad is maintained for the life of the well. The life of a productive well may be 25 years. Following abandonment, the pad is subject to the same restoration parameters.

The following information on the federal mineral tracts is based on information collected during site visits conducted in 2012, aerial photographs, and topographic maps. Mitigation methods for potential negative impacts are listed in Appendix B as lease stipulations and lease notices. These recommended lease stipulations and notices have been developed to provide general habitat protection and setbacks to exclude sensitive habitats from oil and gas development.

Recommended mitigation for the proposed action is suggested as stipulations for freshwater aquatic habitat, cultural resources and tribal consultations, endangered species and special plant species (Appendix B). Additional surveys may be required for special status species after site-specific proposals have been received by BLM during the development phase.

No Action

Under the No Action Alternative, the request to offer the proposed tract for oil and gas lease would be denied. Potential economic benefits of production from this lease would be jeopardized.

CH. 3 – DESCRIPTION OF THE AFFECTED ENVIRONMENT

Introduction

EOI #1493 is located in Lafourche Parish which is located in northwest Louisiana. This region is characterized by a southward facing plain of low, slightly hilly terrain that becomes a flat plain to the south and a broad marshy zone near the coast (USGS 1998). The lease area encompasses approximately 75.48 acres within the Mississippi Alluvial Plain, including portions of the Level IV Ecoregions: freshwater inland swamp and southern holocene meander belts. According to 2009 aerial photography, the majority of the proposed lease area encompasses forested tracts with a small portion cleared and developed for agricultural and/or industrial purposes. The aerial

profile for this area indicates a two general habitat types: cypress swamp and broad-leaf deciduous bottomlands. Elevation within the ease area ranges from 0 – 2 feet.

The legal description for the nominated parcel is: T14S, R18E, Sec. 19, S2SW, Louisiana Meridian, Lafourche Parish, Louisiana (75.48 acres) (Appendix A). EOI #1493 is a 75.48 acre parcel located approximately 2.3 miles southeasterly of the town of Kraemer.

Description of Project Area

Based on review of the elements listed on the SSFO NEPA Form and consideration of the Purpose and Need statement prepared for this EA, the following elements will be addressed in this EA: Air Quality, Environmental Justice, Cultural Resources, Native American Religious Concerns, Invasive/Exotic Species, Soils, Special Status Species, Migratory Birds of Concern, Wildlife and Vegetation, Wastes, Hazardous or Solid, Water Quality, Surface/Ground, Wetland/Riparian Areas/Floodplains, and Energy Policy.

Air Quality

The Clean Air Act of 1970, as amended, requires the establishment of National Ambient Air Quality Standards (NAAQS). Both primary and secondary standards are now in effect. Primary standards define levels of air quality that the Administrator of the Environmental Protection Agency (EPA) judges to be necessary, with an adequate margin of safety, to protect the public health. Secondary standards define levels of air quality that the Administrator of the EPA judges to be necessary to protect the public from any known or anticipated adverse effects of a pollutant. The NAAQS pollutants are monitored in Louisiana by the Louisiana Department of Environmental Quality (LDEQ). These include carbon monoxide, nitrogen dioxide, ozone, sulfur dioxide, total suspended particulate, particulate matter less than 10 microns, and lead. Ambient air quality measurements taken by the Louisiana Division for Environmental Quality (LDEQ) indicate that ambient air quality is within the standards, except in the Baton Rouge area where air quality is in nonattainment for ozone (2008).

Environmental Justice

Title IV of the Civil Rights Act of 1964 and related statutes ensure that individuals are not excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving federal assistance on the basis of race, color, national origin, age, sex, or disability. Executive Order 12898 on Environmental Justice directs that programs, policies, and activities not have a disproportionately high and adverse human health and environmental effect on minority and low-income populations.

Cultural Resources

A literature search was conducted at the Louisiana Division of Archaeology online site files which indicates there are known historic properties (36 CFR 800.16(l)) near lease tracts.

However, the tracts have not been surveyed for cultural resources. These tracts may have sites that would contribute important information about our country's prehistory.

Native American Religious Concerns

Federally recognized Native Americans have been contacted about this proposed undertaking. However, currently, there are no known sites used by Native Americans for religious purposes. There are no known Sacred Sites or traditional cultural properties on this tract. If any such sites are present, access would be by an agreement between the landowner and the Native Americans. The BLM has no authority over access to this tract. The BLM's responsibility is limited to the area of surface disturbance if or when a proposal for development is submitted.

Invasive Exotic Species

The National Resources Conservation Service (NRCS) lists only the Chinese tallow tree (*Triadica sebifera*) as a State-listed Noxious Weed. A report created by the University of Georgia, Center for Invasive Species and Ecosystem Health lists Japanese honeysuckle (*Lonicera japonica*), Johnson grass (*Sorghum halepense*), and the Chinese tallow tree as the top three most widespread invasive plant species in Louisiana. Japanese honeysuckle, Chinese tallow and Japanese climbing fern (*Lygodium japonicum*) are three most abundant invasive plants. These species are ubiquitous throughout the southeast in disturbed areas.

Surface disturbing activities have the potential to introduce or promote the spread of invasive, non-native plant species. Impacts are dependent on the prevalence of invasive species within the project area and species planted during restoration activities and the management of the site during and following restoration. Most restoration activities include non-native grasses, such as annual ryegrass (*Lolium sp.*) during the winter months and Bahia (*Paspalum notatum*) or Bermuda grass (*Cynodon dactylon*) during the summer months to provide cover for disturbed soil areas. If these areas are mowed following abandonment, these non-native grasses are expected to persist and dominate the site. Implementation of best management practices to reduce possible introduction and selection of comparable native cover species will minimize these affects.

Soils

According to NRCS, Soils Survey for Lafourche Parish maps, the EOI area contains Barbary-Fausse (BB) and Fausse-Schriever (FA) associations. Both the Barbary-Fausse and Fausse-Schriever associations are rated by NRCS as very poorly drained. The water table is at or above the surface most if the time. The NRCS has rated both mapped soil associations as "all hydric" (i.e. wetlands).

Special Status Species

According to the U.S. Fish and Wildlife Service database, listed species known to occur in Lafourche Parish are: West Indian manatee (*Trichechus manatus* - endangered), piping plover (*Charadrius melodus* - threatened), gulf sturgeon (*Acipenser oxyrinchus desotoi* - threatened),

green sea turtle (*Chelonia mydas* - threatened), hawksbill sea turtle (*Eretmochelys imbricate* - endangered), Kemp's Ridley sea turtle (*Lepidochelys kempii* - endangered), leatherback sea turtle (*Dermochelys coriacea* - endangered), loggerhead sea turtle (*Caretta caretta* - threatened).

No suitable habitat occurs within the EOI for any of the above listed species. Therefore, the issuance of permits for actions within the EOI would have no effect on those species, and no further consultation with the U.S. Fish and Wildlife Service would be necessary regarding the action, as proposed.

Migratory Birds, Wildlife and Vegetation

The National Wetland Inventory (NWI) database classifies the area within the EOI as palustrine forested, needle-leaved deciduous/broad-leaved deciduous, semi-permanently flooded (PFO2/1F), palustrine forested, needle-leaved deciduous/broad-leaved deciduous, seasonally flooded (PFO2/1C) and palustrine forested, broad-leaved deciduous, seasonally flooded (PFO1C) habitats. These habitats are characteristically cypress-tupelo gum swamps and bottomland hardwood forests. Generally the vegetative classes known to occur within palustrine forested habitats meet hydrophytic vegetation criteria of a wetland.

One of the characteristic features of the Holocene meander belts and inland swamps is a water regime which is either seasonally flooded or semi-permanently flooded, respectively. The NWI database indicates the area is seasonally or semi-permanently flooded. The water table after flooding ceases is variable, extending from saturated to the surface to a water table well below the ground surface. Available information indicates that the proposed lease area exhibits all three wetland criteria (vegetation, hydrology, and soils) and would be subject to regulations overseen by the regulatory authorities and responsibilities of the U.S. Army, Corps of Engineers

Activities associated with construction, production, operation and maintenance of well and pipeline facilities would be expected to reduce available suitable habitat for native wildlife in the area. Impacts to migratory bird species would be expected to occur if clearing activities occur during nesting season. Because the area provides high quality forested habitat, seasonal bird surveys would be necessary to determine nesting activity, species composition and abundance. The extent of habitat impacts would be proportionate to well pad size, pipeline right-of-way dimensions and access roads

Birds – The lease area is within the central Mississippi River migratory flyway. Cypress-tupelo gum swamps and broad-leaf deciduous bottomland such as those in the lease area offer excellent nesting habitat for resident species, and high quality stopover habitat during migration. Such areas also provide plentiful wintering habitat for resident species. Nearly every major group of land bird species would be expected to occur within the lease area at some point throughout the year, with species diversity and abundance greatest during migration (fall and spring). Species expected to occur in the area include: turkey vulture (*Cathartes aura*), red-shouldered hawk (*Buteo lineatus*), broad-winged hawk (*Buteo platypterus*), sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*Accipiter cooperii*), Mississippi kite (*Ictinia mississippiensis*), great horned owl (*Bubo virginianus*), barred owl (*Strix varia*), eastern screech owl (*Otus asio*), barn owl (*Tyto alba*), pileated woodpecker (*Dryocopus pileatus*), red-bellied woodpecker

(*Melanerpes carolinus*), downy woodpecker (*Picoides pubescens*), hairy woodpecker (*Picoides villosus*), prothonotary warbler (*Protonotaria citrea*), black and white warbler (*Mniotilta varia*), northern parula (*Parula americana*), red-eyed vireo (*Vireo olivaceus*), white-eyed vireo (*Vireo griseus*), ruby-crowned kinglet (*Regulus calendula*). Numerous other species of songbirds and raptors would be expected to occur throughout the project area.

Mammals – Species expected to occur in this habitat include: gray squirrel (*Sciurus carolinensis*), white-tailed deer (*Odocoileus virginianus*), eastern cottontail (*Sylvilagus floridanus*), striped skunk (*Mephitis mephitis*), northern raccoon (*Procyon lotor*), opossum (*Didelphus virginiana*), red fox (*Vulpes vulpes*), coyote (*Canis latrans*) and bobcat (*Lynx rufus*) as well as various rodents.

Amphibians and Reptiles – Hardwood deciduous and cypress swamps such as that within the proposed lease area provide suitable habitat for numerous reptiles and amphibians including black racer (*Coluber constrictor*), rat snake (*Elaphe obsoleta*), mud snake (*Farancia abacura*), water snakes (*Nerodia*), garter snake (*Thamnophis sirtalis*), cottonmouth (*Agkistrodon piscivorus*), gulf coast toad (*Bufo nebulifer*), green tree frog (*Hyla cinerea*), spring peeper (*Pseudacris crucifer*) American bullfrog (*Rana catesbeiana*), southern leopard frog (*Rana sphenoccephala utricularia*), and common five-lined skink (*Eumeces fasciatus*).

Invertebrates – Hardwood deciduous and cypress swamps provide high quality habitat for numerous invertebrate species. Aquatic habitats are correlated with high invertebrate species diversity, including butterfly and moths (*Lepidoterans*), dragonflies and damsel flies (*Odonata*), beetles (*Coleoptera*), wasps (*Hymenopterans*), bee flies (*Bombyliidae*), horseflies (*Tabanidae*) and spiders (*Arachnidae*).

Wastes, Hazardous or Solid

During the on site inspections, no hazardous or solid waste disposal site were found on the lease tracts.

Water Quality, Surface/Ground

Surface Water Quality

The most frequently cited suspected causes of impairment for all water bodies combined in Louisiana are fecal coliforms, primarily from septic tanks and municipal sewage treatment systems; low dissolved oxygen from sewage, agriculture, or natural causes; sediment-related problems such as turbidity, suspended solids, and siltation caused by agriculture, forestry, sewage systems, construction, hydro-modification, resource extraction, or natural processes; and mercury related to fish consumption advisories, due primarily to atmospheric deposition of mercury on the watershed. Many of the suspected sources of water quality impairment are known collectively as nonpoint source pollution because it typically does not come from a single point of discharge but runs across the land when it rains and is carried through small canals and streams to major water bodies (LDEQ 2008).

Many of Louisiana's water bodies remain impaired for the designated use of fish and wildlife propagation. This is largely because there are many possible causes and sources of impairment

impacting this use, and any one of these causes can result in a water body being considered impaired for fish and wildlife propagation. There are more than 30 different suspected causes of impairment reported as impacting fish and wildlife propagation. With the exception of mercury, all of the top eight suspected causes of impairment generally can be related to nonpoint sources of pollution. The remaining causes of impairment generally are related to various forms of industry, small business, or municipal sources (LDEQ 2008)

Ground Water Quality

The results of the Baseline Monitoring Program indicate that water quality is good in Louisiana aquifers. Although the overall quality of the state's ground water is good, there are more than 200 sites where active investigation or remediation of contaminated ground water is taking place, not including underground storage tank or Superfund sites. There also were 14 public water supply systems impacted by volatile organic compounds (VOC) contamination of ground water between 1989 and 2002 (GWPC 2009b).

The proposed site is located within the Mississippi embayment aquifer system which consists of 6 aquifers that crop out as an arcuate band of poorly consolidated to unconsolidated, bedded sand, silt and clay. Geologic units of the aquifer system range from Late Cretaceous to middle Eocene in age. These tracts are located within the Middle Claiborne aquifer. Aquifers of the Mississippi embayment aquifer system consist of an interbedded sequence of poorly consolidated fluvial, deltaic, and marine deposits in which diagenesis or post-depositional geochemical processes have not greatly altered the original pattern of permeability. The hydraulic conductivity of the unconsolidated to poorly consolidated sediments that compose the aquifers of the Mississippi embayment aquifer system does not appear to have been greatly reduced by cementation or compactions. Consequently, the distribution of hydraulic conductivity and transmissivity of the Mississippi embayment aquifer system can be inferred from maps of sediment lithofacies, if a direct correlation between sediment type and aquifer permeability is assumed.

Wetlands/Riparian Areas/Floodplains

To be considered a jurisdictional wetland, it is necessary that three hydrologic indicators, hydrology, vegetation and soils, be present. The absence of any one of these criteria could exclude an area from being a wetland under the jurisdiction of the U.S. Army Corps of Engineers. Available information indicates that the proposed lease area exhibits all three wetland criteria and would be subject to regulations overseen by the regulatory authorities and responsibilities of the U.S. Army, Corps of Engineers

The proposed EOI is just outside of the current boundaries of the Louisiana Coastal Zone, a distinct region subject to regulatory governance of the Louisiana Department of Natural Resources, Office of Coastal Management, under authority of the Louisiana State and Local Coastal Resources Management Act of 1978, as amended (Act 361, La. R.S. 49:214.21 et seq). The boundary in this area is LA Hwy. 307. The coastal zone boundaries are currently under review for possible revisions. Therefore, it is noted that, given the proximity to the current Coastal Zone boundary, the proposed lease area has potential to come under the regulatory authority of the Office of Coastal Management in the future.

Energy Policy

The area contains no features related to energy development, production, supply or distribution.

Ch. 4 - ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION AND ALTERNATIVES

Introduction

This chapter assesses potential environmental consequences associated with direct, indirect, and cumulative effects of the Proposed Action and alternatives.

Based on review of the elements listed on the SSFO NEPA Form and consideration of the Purpose and Need statement prepared for this EA, the following elements will be addressed in this EA: Air Quality, Environmental Justice, Cultural Resources, Native American Religious Concerns, Invasive/Exotic Species, Soils, Special Status Species, Migratory Birds of Concern, Wildlife and Vegetation, Wastes, Hazardous or Solid, Water Quality, Surface/Ground, Wetland/Riparian Areas/Floodplains, and Energy Policy.

Air Quality

If the lease is developed for oil and gas production, impacts to air quality associated with construction, drilling, production and abandonment could come from the following sources: (1.) fugitive dust generated from vehicle traffic along dirt or gravel roads during transportation of employees and equipment; (2.) exhaust from heavy machinery, vehicles, compressors, drilling rig prime movers, generators, and other internal combustion engines used during site construction, drilling, flowline installation, production, and abandonment and other production equipment such as pumps, separators, heater treaters, boilers; and (3.) fugitive VOC escaping from leaky pipe valves, flanges, and storage tanks during loading of crude oil to tank trucks, and accidental releases/spills of hydrocarbons.

Fugitive dust created during road, drill pad, flowline construction, and abandonment would increase suspended particulates in the air. Also, the regulated air pollutants nitrogen oxides (NO_x), sulfur oxides (SO_x), VOC, and particulates (Pm) will be emitted from the above referenced sources. These conditions could temporarily impact the ambient air quality in the immediate vicinity of the leased area. The generation of suspended particulates, a regulated pollutant, could cause a temporary and localized disturbance to people who work in the area. However, the impacts from the combined frequency and volume of fugitive dust and regulated air pollutants are expected to be minimal, very localized, and of short duration.

Environmental Justice

There is no adverse human health and environmental effects anticipated from potential development on minority and low-income populations in the areas surrounding this tract.

Cultural Resources and Native American Religious Concerns

Cultural resource surveys have not been conducted, therefore direct and indirect impacts may occur to cultural resources or to a potentially sacred Native American religious site if there is ground disturbance. Direct impacts are those such as completely destroying a site by bulldozing the area and workers picking up artifacts. Indirect impacts are those such as erosion or compaction of the soil on the site. However, if sites are located and recorded before ground disturbance begins, these impacts can be avoided or mitigated.

A stipulation regarding cultural resources and Native American religious concerns applies to this lease (Appendix B) and is applicable for all the proposed parcels. The stipulation states that the BLM will not approve any ground disturbing activities that may affect historic properties and/or resources until it completes its obligations under applicable requirements of the National Historic Preservation Act and other authorities. If currently unknown burial sites are discovered during development activities associated with this lease, these activities must cease immediately, applicable law on unknown burials will be followed and, if necessary, consultation with the appropriate tribe/group of federally recognized Native Americans will take place.

Invasive/Exotic Species

Surface disturbing activities have the potential to introduce or promote the spread of invasive, nonnative plant species. Impacts are dependent on the species planted during restoration activities and the management of the site during and following restoration. Revegetating areas after soil disturbance with competitive grasses greatly reduces the ability for invasive species to take hold in an area. The Natural Resources Conservation Service recommends the mixture below for revegetation efforts in Louisiana:

Blend #1 LA (weight in pure live seed or PLS lb/ac)

- Switchgrass 60% = 2.4 lb
- IL Bundleflower 20% = 2.4 lb
- Partridge Pea 15% = 1.2 lb
- Black-eyed Susan 3% = .03 lb
- Plains Coreopsis 2% = .02 lb

A lease notice regarding invasive/exotic species applies to this lease (Appendix B) and is applicable for the proposed parcel. The lease notice states that the use of native or non-invasive plants in seeding mixtures will be encouraged to stabilize disturbed areas and during restoration activities. Construction sites will be surveyed for invasive species prior to ground disturbance. If invasive species are found, the proper control measures will be used to either eradicate the species from the area or minimize its spread to other areas.

Soils

Well site and access road construction would have direct impacts to soils. These impacts would be limited to those areas where vegetation is removed and construction occurs. The direct impacts would be of two types: (1) physical removal, leveling and mixing of surface soils and (2)

soil compaction. The first impact would be caused by site preparation for construction of the well pad, related structures, road construction, flowline construction and wind and water erosion after vegetation is removed. This would cause a mixing of soil horizons and cause a short term loss of soil productivity. The second impact, soil compaction, would be caused by vehicle and machinery travel. Compaction decreases air and water infiltration into the soil profile thus reducing soil productivity. The indirect impact would be that of erosion and siltation of drainages and streams. Prompt cultivation and re-vegetation of impacted soil areas should reduce the possibility of soil erosion thus preventing an increase of siltation into drainages or streams from run-off. Site specific conditions of approval would be developed prior to approval of an APD to address soil erosion.

Special Status Species

No special status species are known or expected to occur at this site, due to a lack of suitable habitat so impacts from potential development will not occur. Stipulations and lease notices regarding endangered species apply to this lease (Appendix B) and are applicable for the nominated parcel. The stipulation states that the BLM may recommend modifications to exploration and development proposals to further the conservation and management objectives for threatened, endangered, or other special status plant or animal species or their habitat to avoid BLM-approved activity that would contribute to a need to list such a species or their habitat. The lease notice gives recommendations for disposing produced water in such a way as to protect aquatic habitats for and to avoid potential impacts to special status fish, mussels, turtles, snails, plants, and migratory birds.

To protect threatened, endangered, candidate, proposed, and BLM sensitive plant species a second stipulation applies to this lease and applies to the proposed parcel. The stipulation states that all suitable special status plant species habitat will be identified during environmental review of any proposed surface use activity. If field examination indicates that habitat of one or more of these species is present, the BLM will require a survey by a qualified botanist for special status plants during periods appropriate to each species. Operations will not be allowed in areas where sensitive plants would be affected.

Migratory Bird Species of Concern

Nesting and foraging habitat for birds will be altered dramatically if forests are cut for oil and gas development. Many of the species with the potential to occur on this tract could move to similar habitats in surrounding areas. After the well is put into production and during reclamation activities bird species diversity would be altered depending on successional stage of the site and adequacy of restoration efforts.

To protect perch and roosting sites and terrestrial habitats for and to avoid potential impacts to migratory birds and federally listed wildlife a lease notice applies to this lease and applies to all proposed parcels. The lease notice provides recommendations regarding reserve pits, maximum design speeds for roads, and powerline construction to minimize effects on migratory birds.

Wildlife and Vegetation

The Reasonable Foreseeable Development Scenario (RFD) for EOI #1493 predicts that 1 well will be drilled from 1 pad. The total disturbance predicted would be 3.10 acres, with 2.81 acres disturbed for the well pad and pit, 0.69 acres for the access road, and 0.40 acres reclaimed (Appendix D).

Many of the species expected to occur on this site have broad habitat requirements and would continue to be found in a variety of habitats in the surrounding areas. Wildlife use of the site after wells are put into production would vary depending on vegetation and succession stage. Once put into production well pads would be reduced in size and reserve pits would be graded and seeded. The producing well site would be subject to regular maintenance and inspection. Wildlife use of the site is dependent on the adequacy of restoration. However, over the life of the wells, some of the acreage would be excluded from utilization by most wildlife species.

Wastes, Hazardous or Solid

The operations would typically generate the following wastes; (a) discharge of drilling fluids and cuttings into the reserve pits; (b) wastes generated from used lubrication oils, hydraulic fluids, and other fluids used during production of oil and gas, some of which may be characteristic or listed hazardous waste; and (c) service company wastes from exploration and production activities as well as containment of some general trash. Certain wastes unique to the exploration, development, and production of crude oil and natural gas have been exempted from Federal Regulations as hazardous waste under Subtitle C of the Resource Conservation and Recovery Act (RCRA) of 1976. The exempt waste must be intrinsic to exploration, development or production activities and is not generated as part of a transportation or manufacturing operation. The drilling fluids, drill cuttings, and produced waters are classified as a RCRA exempt waste, and the proposed action would not introduce hazardous substances into the environment if they are managed and disposed of properly under Federal, State, and local waste management regulations and guidelines.

Water Quality, Surface/Ground

Construction would cause some minor erosion and re-deposition of soil a short distance away from the construction area. Improper casing and/or cementation can result in contamination of ground water aquifers. The BLM requires that the operator must isolate freshwater-bearing formations and other usable water containing 10,000 ppm or less of total dissolved solids (TDS) and other mineral-bearing formations and protect them from contamination by using proper casings. In addition, the BLM requires lining the reserve and water pit with a suitable liner on a case-by-case basis.

Wetlands/Riparian Areas/Floodplains

This is a No Surface Occupancy (NSO) lease because disturbance is not permitted within 250 feet of streams, rivers, wetlands or springs and the entire EOI is considered a wetland.

No Action

Under this alternative, the parcels within the proposed action would remain unleased at this point in time. It could be offered for leasing in the future, but may be subject to additional environmental analysis at that point in time. If the parcels were not leased there would be no direct impacts to the potential drill location and therefore no effects on all of the critical elements above except Cultural Resources and Native American Religious Concerns (see below). As compared to the proposed action, there would be less disturbance resulting from oil and gas related actions.

Cultural Resources

If the area is not leased and cultural resource surveys are not conducted, direct and indirect impacts may occur. Direct impacts are those such as completely destroying a site by “relic hunters” or by people picking up artifacts. Other direct impacts may be the mixing of layers in a site by plowing or the destruction of a site by land leveling. Indirect impacts are those such as after timber thinning or clear-cutting erosion of the remains of a site. Hunting activities may cause other impacts to the surface such as the deposition of spent ammunition shells and other items. However, the use of the property is the purview of the land owner, and any cultural resource site and its artifacts are the property of the land owner.

Native American Religious Concerns

Under this alternative, places of Native American Religious Practice could be impacted by activities of the landowner, unless there was a formal agreement between the landowner and the Native American tribe. Direct impacts could be the destruction of a site, and an indirect impact could be the landowner placing a fee on the use of the area.

Cumulative Impacts

Cumulative impacts are the impacts to the environment which result from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions. Since the proposed action would not authorize surface occupancy, no environmental impacts are anticipated on the lease. Hence, the proposed action will not contribute to the impacts to other past, present, or reasonable foreseeable actions. For Cultural Resources and Native American Religious Concerns this is dependent upon cultural resource surveys being conducted.

Energy Policy

Energy Policy Act of 2005 – Sets forth an energy research and development program covering: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) Indian energy; (6) nuclear matters and security; (7) vehicles and motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11) hydropower and geothermal energy; and (12) climate change technology.

Title III: Oil and Gas

Subtitle B: Natural Gas

(Sec. 313) Designates FERC as the lead agency for coordinating federal permits and other authorizations and compliance with the National Environmental Policy Act of 1969 (NEPA). Directs FERC to establish a schedule for all federal authorizations.

Subtitle C: Production

(Sec. 322) Amends the Safe Drinking Water Act to exclude from the definition of underground injection the underground injection of fluids or propping agents (other than diesel fuels) pursuant to hydraulic fracturing operations related to oil or gas, or geothermal production activities.

Subtitle F: Access to Federal Lands

(Sec. 361) Requires the Secretary of the Interior to perform an internal review of current federal onshore oil and gas leasing and permitting practices.

(Sec. 364) Amends the Energy Act of 2000 to revise the requirement that the Secretary of the Interior, when inventorying all onshore federal lands, identify impediments or restrictions upon oil and gas development.

(Sec. 366) Amends the Mineral Leasing Act to set deadlines for an expedited permit application process.

(Sec. 368) Prescribes guidelines governing energy right-of-way corridors on federal land.

Directs the Secretaries of Agriculture, of Commerce, of Defense, of Energy, and of the Interior (the Secretaries), in consultation with FERC, states, tribal or local government entities, affected utility industries, and other interested persons, are directed to consult with each other and to: (1) designate corridors for oil, gas, and hydrogen pipelines and electricity transmission and distribution facilities on federal land in the 11 contiguous Western States; (2) incorporate the designated corridors into the relevant energy land use and resource management or equivalent plans; and (3) ensure that additional corridors are promptly identified and designated.

(Sec. 371) Amends the Mineral Leasing Act to cite conditions for the reinstatement of oil and gas leases terminated for certain failure to pay rentals.

Subtitle G: Miscellaneous

(Sec. 390) States that action by the Secretary of the Interior in managing the public lands, or the Secretary of Agriculture in managing National Forest System Lands, with respect to certain oil or gas drilling related activities shall be subject to rebuttable presumption that the use of a categorical exclusion under NEPA would apply if the activity is conducted pursuant to the Mineral Leasing Act for the purpose of exploration or development of oil or gas.

CH. 5 - LIST OF AGENCIES AND PERSONS CONSULTED

The following agencies/tribes were contacted (Appendix C):

Louisiana State Historic Preservation Officer

Tunica-Biloxi Tribe of Louisiana

Alabama Coushatta Tribe of Texas

Coushatta Indian Tribe

Chitimacha Tribe of Louisiana

Caddo Nation of Oklahoma
Muscogee (Creek) Nation of Oklahoma
Alabama-Quassarte Tribal Town
Choctaw Nation of Oklahoma
Jena Band of Choctaw
Mississippi Band of Choctaw Indians
Thlopthlocco Tribal Town
Quapaw Tribe of Oklahoma

Literature Cited

LDEQ, Louisiana Department of Environmental Quality. 2008. Final Draft 2008 Louisiana Water Quality Inventory: Integrated Report.

List of Preparers

Specialist Name

Title, Organization

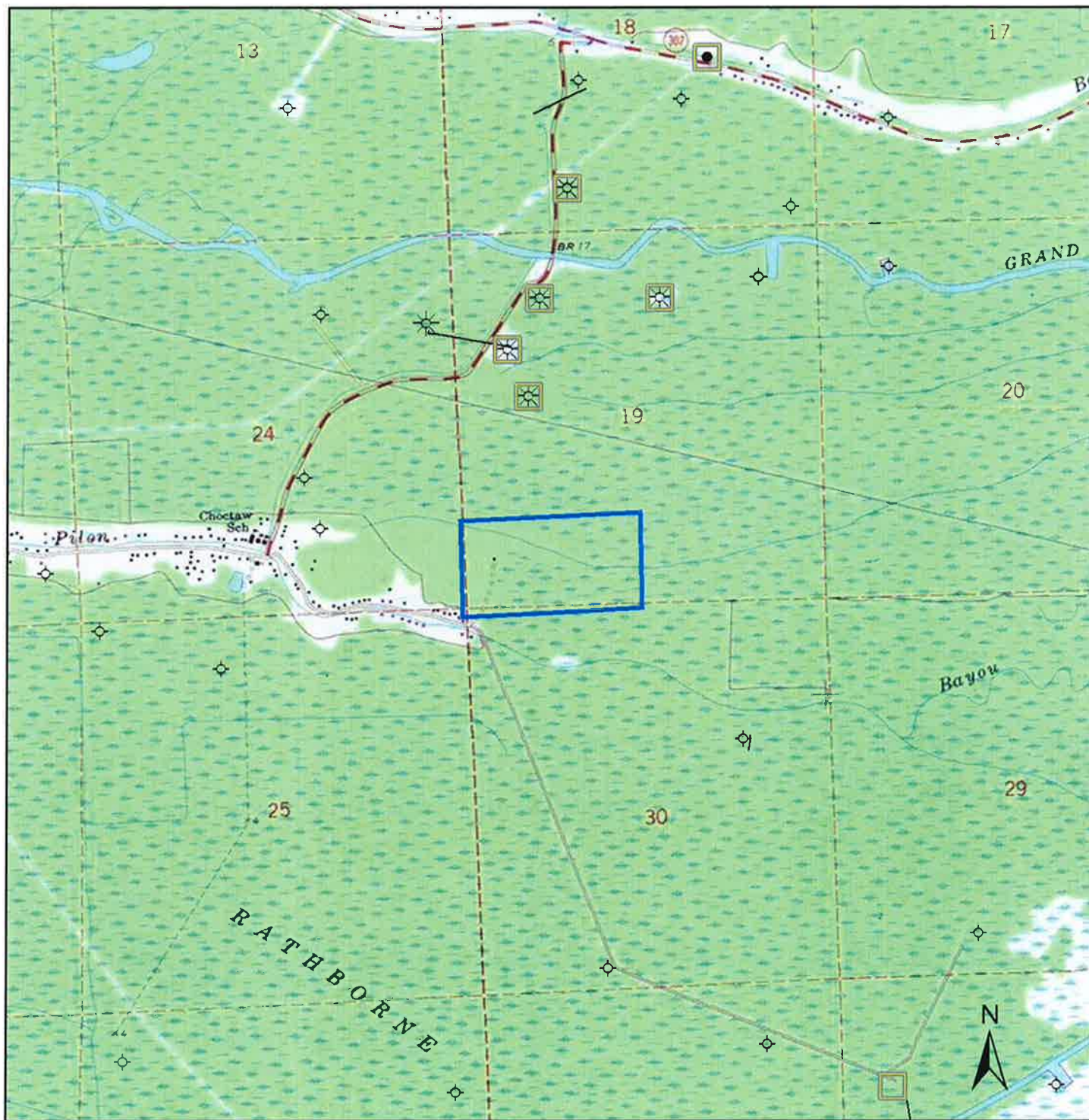
Alison McCartney
John Sullivan
Gary Taylor

Natural Resource Specialist
Archaeologist
Planning and Environmental Coordinator

APPENDIX A

Proposed Lease Tract Locations

Proposed Federal Oil and Gas Lease EOI 1493



Proposed Lease Area:
Lafourche Parish, Louisiana, Louisiana Meridian
T. 14S., R. 18E., Sec. 19, S1/2SW1/4
Approximately 75.48 acres.

U.S. Department of the Interior
Bureau of Land Management
Eastern States, Jackson Field Office
Jackson, Mississippi

This map contains portions of the following USGS 1:24,000 Topographic Quadrangles: Kora Bossier Point

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No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.

APPENDIX B

Proposed Lease Stipulations and Lease Notices

Stipulations

Cultural Resources and Tribal Consultation

Stipulation: This lease may be found to contain historic properties and/or resources protected under the National Historic Preservation Act (NHPA), American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, E.O. 13007, or other statutes and executive orders. The BLM will not approve any ground disturbing activities that may affect any such properties or resources until it completes its obligations under applicable requirements of the NHPA and other authorities. These obligations may include a requirement that you provide a cultural resources survey conducted by a professional archaeologist approved by the State Historic Preservation Office (SHPO). If currently unknown burial sites are discovered during development activities associated with this lease, these activities must cease immediately, applicable law on unknown burials will be followed and, if necessary, consultation with the appropriate tribe/group of federally recognized Native Americans will take place. The BLM may require modification to exploration or development proposals to protect such properties, or disapprove any activity that is likely to result in adverse effects that cannot be successfully avoided, minimized or mitigated.

Endangered Species

Stipulation: The lease area may now or hereafter contain plants, animals, or their habitats determined to be threatened, endangered, or other special status species. BLM may recommend modifications to exploration and development proposals to further its conservation and management objective to avoid BLM-approved activity that will contribute to a need to list such a species or their habitat. BLM may require modifications to or disapprove proposed activity that is likely to result in jeopardy to the continued existence of a proposed or listed threatened or endangered species or result in the destruction or adverse modification of a designated or proposed critical habitat. BLM will not approve any ground-disturbing activity that may affect any such species or critical habitat until it completes its obligations under applicable requirements of the Endangered Species Act as amended, 16 U.S.C. ' 1531 et seq., including completion of any required procedure for conference or consultation.

Exception: None

Modification: None

Waiver: None

Sensitive Plant Species

Stipulation (CSU): All suitable special status plant species habitat will be identified during environmental review of any proposed surface use activity. If field examination indicates that habitat of one or more of these species is present, the BLM will require a survey by a qualified botanist for special status plants during periods appropriate to each species. Operations will not be allowed in areas where sensitive plants would be affected.

Objective: To protect threatened, endangered, candidate, proposed, and BLM sensitive plant species.

Exception: An exception may be granted if the operator agrees to implement measures developed in consultation with USFWS and in coordination with State agencies.

Modification: The stipulation may be modified if it is determined that a portion of the lease area does not contain sensitive plant species habitat.

Waiver: The stipulation may be waived if, based on field surveys, it is determined that the lease area does not contain sensitive plant species habitat.

Freshwater Aquatic Habitat

Stipulation (NSO): No surface occupancy or disturbance, including discharges, are permitted within 250 feet of a river, stream, wetland spring, headwater, wet meadow, wet pine savanna, pond, tributary, lake, coastal slough, sand bar, vernal pools, calcareous seepage marsh, or small, marshy calcareous stream. If the slope exceeds 10 percent, the buffer may be extended to 600 feet to provide adequate protection for aquatic habitats and associated species.

Objective: To protect the water quality of watersheds and natural stream substrate and morphology and to avoid potential impacts to aquatic species and their habitat.

Exception: An exception may be granted if the operator agrees to 1) span creeks, rivers, wetlands, and floodplains by attaching pipelines to bridges; 2) directionally drill wells and pipelines from upland sites under creeks, rivers, other waters, and wetlands or 3) implement other measures developed in consultation with USFWS and in coordination with State agencies.

Modification: The buffer may be reduced if the adjacent waterway has been surveyed for 100 yards upstream and 300 yards downstream of the site, and the results document the lack of suitable/occupied/critical habitat for listed species which may be affected by the project, as determined by the BLM and USFWS.

Waiver: None

Lease Notices/Best Management Practices

Disposal of Produced Water

Objective: To protect aquatic habitats for and to avoid potential impacts to special status fish, mussels, turtles, snails, plants, and migratory birds.

The preferred method for disposal of produced water will be through reinjection to a permeable formation with total dissolved solids (TDS) content higher than 10,000 milligrams per liter (mg/L) where the aquifer is not hydrologically connected to caves, wetlands, or surface water. In Alabama, the injection of produced water is regulated by the Alabama State Oil and Gas Board. In Mississippi, the injection of produced water is regulated by the Mississippi Department of Environmental Quality (MDEQ) and the Mississippi Oil and Gas Board.

If reinjection is not practicable, closed-containment treatment systems should be used to contain and treat produced water for those contaminants and sediments exceeding State standards or EPA criteria. Salt content of any surface ponds for produced water, pigging pits, or other fluids must be less than 7,500 microsiemens per centimeter ($\mu\text{S}/\text{cm}$). If surface pond salt content is greater than 7,500 $\mu\text{S}/\text{cm}$, if other bird toxicity is present, or if the surface exhibits sheen, then the ponds must be netted or covered with floating balls, or other methods must be used to exclude migratory birds.

Produced waters may be released into an impounded reservoir if there is documentation that the discharge site and affected waters do not support special status species, are not designated critical habitat, and State and Federal water quality standards/criteria are met.

Produced waters may be released into a stream/river if the discharge site and affected waters have been recently surveyed and lack special status species, or if the applicant conducts approved surveys documenting the absence of special status species, State and Federal water quality standards/criteria are met, and a National Pollution Discharge Elimination System (NPDES) permit is obtained. The applicant should be aware that some species can be surveyed only during certain times of the year.

Produced waters may be released into a stream/river if the applicant can document that the produced waters would not adversely affect special status species. Water quality tests would be conducted on stream segment(s) or other locations proposed as discharge points, volumes to be released, and any settling ponds or other treatments proposed to improve wastewater quality. The water quality test data, any monitoring proposed, and other available information about general coalbed methane effluent characteristics (from published or unpublished literature) shall be reviewed by USFWS. Information about timing of the releases in relation to low water and other planned BMPs would also be required. Testing would include analysis of the discharge site and affected waters for chemical oxygen demand (COD), conductivity, total suspended solids (TSS), As, Hg, Se, and polycyclic aromatic hydrocarbons (PAH). Dissolved oxygen and ammonia standards/criteria must be met in bottom waters if they support listed benthic or epibenthic species. If a special status species has been documented to be more sensitive than State/Federal standards/criteria, site-specific standards for that species may be imposed. Calculations would be

based on State standards (or Federal CCC criteria for protection of freshwater aquatic life when the State has not determined a standard for these parameters).

Migratory Birds and Federally Listed Wildlife

Objective: To protect perch and roosting sites and terrestrial habitats for and to avoid potential impacts to migratory birds and federally listed wildlife.

Any reserve pit that is not closed within 10 days after a well is completed and that contains water must be netted or covered with floating balls, or another method must be used to exclude migratory birds.

Maximum design speed on all operator-constructed and maintained (non-public) roads shall not exceed 25 miles per hour to minimize the chance of a collision with migratory birds or other listed wildlife species.

All powerlines must be built to protect raptors and other migratory birds, including bald eagles, from accidental electrocution, using methods detailed by the Avian Power Line Interaction Committee (APLIC 2006)

Perching and Nesting Birds and Bats

Objective: To prevent birds and bats from entering or nesting in or on open vent stack equipment.

Open vent stack equipment, such as heater-treaters, separators, and dehydrator units, will be designed and constructed to prevent birds and bats from entering or nesting in or on such units and, to the extent practical, to discourage birds from perching on the stacks. Installing cone-shaped mesh covers on all open vents is one suggested method. Flat mesh covers are not expected to discourage perching and will not be acceptable.

Invasive and Non-Native Species

Objective: To discourage the spread of invasive, non-native plants.

Use of native or non-invasive plants in seeding mixtures will be encouraged to stabilize disturbed areas and during restoration activities. Construction sites will be surveyed for invasive species prior to ground disturbance. If invasive species are found, the proper control measures will be used to either eradicate the species from the area or minimize its spread to other areas. If cogongrass is found on site, equipment will be washed before exiting the site to prevent the spread of this highly invasive species to other locations. Post-construction monitoring for cogongrass and other invasive plant species should be conducted to ensure early detection control. In the case of split-estate lands, final seed mixtures will be formulated in consultation with the private landowner.

Pesticide Application

Objective: To protect the water quality of watersheds and natural stream substrate and morphology supporting special status species and their host species.

Any ground application of herbicides or other pesticides, sterilants, or adjuvants within 150 feet of listed species or habitat will require site-specific control measures developed in coordination or formal consultation with USFWS. No aerial application of herbicides or pesticides will be permitted

APPENDIX C

Correspondence



United States Department of the Interior

Bureau of Land Management

Southeastern States Field Office

411 Briarwood Drive, Suite 404

Jackson, Mississippi 39206

<http://www.es.blm.gov>



IN REPLY REFER TO: 8100 (020) JMS Cleburne Co. EOI 1496

Oct. 28, 2011

Tarpie Yargee, Chief
Alabama-Quassarte Tribal Town
P.O. Box 187
Wetumka, OK 74883

Dear Chief Yargee:

The Bureau of Land Management (BLM) has received an Expression of Interest (EOI 1496) to lease federal minerals under privately owned surface, i.e. split-estate minerals. The Bureau's Reasonably Foreseeable Development Scenario for this proposed lease is five wells to be drilled from one existing well pad, with no additional disturbance. The legal locations of the approximately 120 acres of federal mineral tracts are as follows (map enclosed):

5th Principal Meridian

Cleburne County (Heber Springs, Rose Bud, West Pangbun and Sidon
Quadrangles)

T. 9 N., R. 10 W., Sec. 25, NWSE

T. 9 N., R. 10 W., Sec. 36, N1/2SE (Total acres 120))

Proposed development locations have not been determined on a site-specific basis. Specific locations proposed for development are determined by the developer and surface owners. A section of the lease document will state that before the BLM approves any development proposal, a survey that meets current professional standards and a report that meets Arkansas Historic Preservation Program requirements may be required on a site-specific basis. A report of survey results must be approved by both the Arkansas Historic Preservation Program and the BLM before any ground disturbing activities take place. Any needed consultation will be concluded before ground-disturbing activities begin.



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In addition, a stipulation will be included in the lease document which covers accidental discovery and requires additional consultation with you and the Arkansas Historic Preservation Program. This stipulation will also be included in the permitting documents when, or if, a development proposal is submitted.

If you are aware of any sites within the proposed lease area which are currently being used for religious purposes or are recognized as sacred sites on these privately owned lands, please let us know so that additional consultation can be conducted and so that impacts will not occur. As provided by law, any specific location information will be held in confidence. Your information is requested within 30 days.

If you have any questions or comments, please contact John M. Sullivan, Archeologist, at (601) 977-5439 or John_M_Sullivan@BLM.Gov.

Sincerely,
Original Signed
Grace Guess

Grace Guess Acting for

Bruce Dawson
Field Manager

Enclosures
1 - Map

cc via email: Augustine Asbury, 2nd Chief/ Cultural Preservation Officer

bc:

JFO CF & RF

ES RF

DWinters

AMcMartney

ES020:JMSullivan:10/28/2011:601-977-5400:Cleburne.T9N.R10W.25 36.EOI 1496.NA Ltr



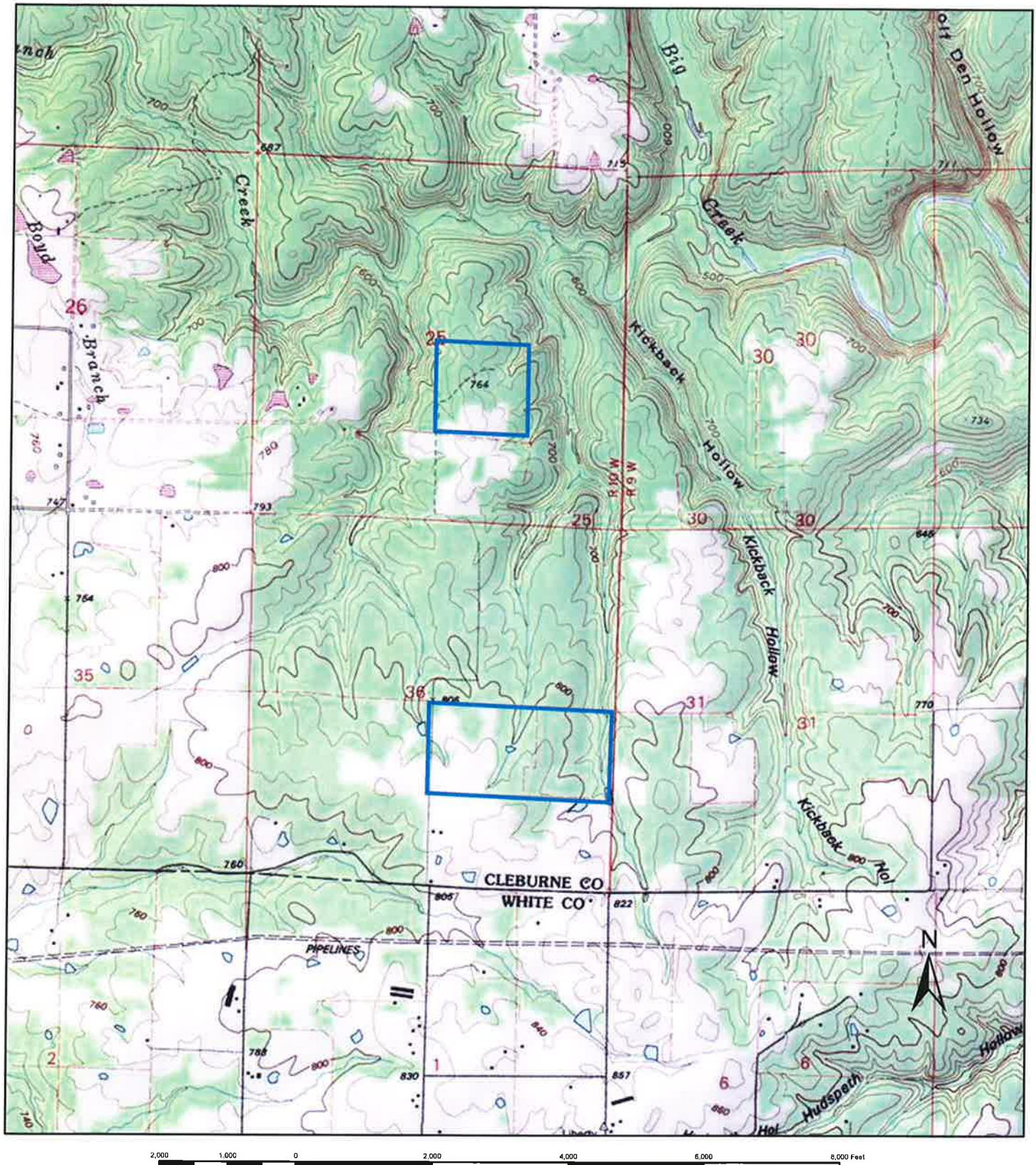
Original letters to these	CC letters to these
Only send email to Preservation Officer Tarpie Yargee, Chief Alabama-Quassarte Tribal Town P.O. Box 187 Wetumka, OK 74883	Augustine Asbury, 2nd Chief/ Cultural Preservation Officer P.O. Box 187 Wetumka, OK 74883 aqttcultural@yahoo.com
George Wickliffe, Chief United Keetoowah Band of Cherokee Indians in Oklahoma P. O. Box 746 Tahlequah, Oklahoma 74465	Ms. Lisa Stopp, Tribal Historic Preservation Officer P.O. Box 746 Tahlequah, OK 74465 llarue@unitedkeetoowahband.org
John Red Eagle, Principal Chief Osage Nation 627 Grandview Pawhuska, Oklahoma 74056	Dr. Andrea Hunter, Tribal Historic Preservation Officer 627 Grandview Pawhuska, Oklahoma 74056 ahunter@osagetribe.org
A.D. Ellis, Principal Chief Muscogee (Creek) Nation of Oklahoma P.O. Box 580 Okmulgee, Oklahoma 74447	Emman Spain, Cultural/Historic Preservation Office Muscogee (Creek) Nation of Oklahoma P.O. Box 580 Okmulgee, OK 74447 espain@muscogeenation-nsn.gov
Bill John Baker, Principal Chief Cherokee Nation of Oklahoma P. O. Box 948 Tahlequah, Oklahoma 74465	Dr. Richard Allen, Cultural/Historic Preservation Office P.O. Box 948 Tahlequah, OK 74465 Richard-Allen@cherokee.org
Leonard Harjo, Principal Chief Seminole Nation of Oklahoma P.O. Box 1498 Wewoka, Oklahoma 74884	Natalie Deer, Cultural Preservation Office P.O. Box 1768 Seminole, OK 74868-1768 ndeere@seminolenation.com
John Berrey, Chairman Quapaw Tribe of Oklahoma P.O. Box 765 Quapaw, Oklahoma 74345	Jean Ann Lambert, Cultural/Historic Preservation Office P.O. Box 1556 Miami, OK 74355 jlambert@quapawtribe.com
Earl Barbry, Sr., Chairman Tunica - Biloxi Tribe 151 Melacon Dr. Marksville, Louisiana 71351	Mr. Earl Barbry, Jr., Tribal Historic Preservation Officer Tunica - Biloxi Tribe 151 Melacon Dr. Marksville, LA 71351 earlii@tunica.org



Original letters to these	CC letters to these
George Scott, Mekko Thlopthlocco Tribal Town P.O. Box 188 Okemah, Oklahoma 74859 918-560-6198	Charles Coleman, Cultural/Historic Preservation Office P.O. Box 188 Okemah, Oklahoma 74859 chascoleman@prodgy.net



**Proposed Federal Oil and Gas Lease
EOI 1496**



 Proposed Lease Area

Proposed Lease Area:
Cleburne County, Arkansas, 5th Principal Meridian
T. 9N., R. 10W., Sec.25, NWSE
T. 9N., R. 10W., Sec.36, N1/2SE
Approximately 120 acres.

**U.S. Department of the Interior
Bureau of Land Management
Eastern States
Southeastern States Field Office
Jackson, Mississippi**

This map contains portions of the following USGS 1:24,000 Topographic Quadrangles: Heber Springs, Rose Bud, West Pangburn, Sidon

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.



United States Department of the Interior
Bureau of Land Management

Eastern States
Southeastern States Field Office
411 Briarwood Drive, Suite 404
Jackson, Mississippi 39206
<http://www.es.blm.gov>



IN REPLY REFER TO: 8100 (020) JMS EOI 1493, Lafourche Parish

Sept. 06, 2011

Chairman Earl Barbry, Sr.
Tunica-Biloxi Tribe of Louisiana
P.O. Box 332
Marksville, Louisiana 70523

Dear Chairman Barbry:

The Bureau of Land Management (BLM) has received an Expression of Interest (EOI 1493) to lease federal minerals under privately owned surface, i.e. split-estate minerals. The Bureau's Reasonably Foreseeable Development Scenario for this proposed lease is one well from one well pad to be constructed on private surface with no more than 3.5 acres total, access road and pads, to be disturbed accessing federal minerals. The legal locations of the approximately 75.48 acres of federal mineral tracts are as follows (map enclosed):

Louisiana Meridian
Lafourche Parish (Kraemer Quadrangle)
T. 14 S., R.18 E., Sec. 19, S1/2SW1/4 (75.48 acres)

A review of the Louisiana Division of Archaeology site files shows no sites within one mile of the proposed lease sale. Development locations have not been determined on a site-specific basis. Specific locations proposed for development are determined by the developer and surface owners. The BLM's surface responsibilities rest only within the boundaries of any proposed development. A review of the Louisiana Division of Archaeology online site files shows no sites within one mile of the proposed lease sale.

A section of the lease document will state that before the BLM approves any development proposal, a survey that meets current professional standards and a report that meets Louisiana Division of Archaeology requirements. The report must be approved by both the Louisiana



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Division of Archaeology and the BLM before any ground disturbing activities take place. Any needed consultation will be concluded before ground-disturbing activities begin.

In addition, a stipulation will be included in the lease document which covers accidental discovery and requires additional consultation with you and the Louisiana Division of Archaeology. This stipulation will also be included in the permitting documents when, or if, a development proposal is submitted.

If you are aware of any sites within the proposed lease area which are currently being used for religious purposes or are recognized as sacred sites on these privately owned lands, please let us know so that additional consultation can be conducted and so that impacts will not occur. As provided by law, any specific location information will be held in confidence. Your information is requested within 30 days.

If you have any questions or comments, please contact John M. Sullivan, Archeologist, at (601) 977-5439 or John_M_Sullivan@BLM.Gov.

Sincerely,

**Original Signed
Bruce Dawson**

Bruce Dawson
Field Manager

Enclosures
1 - Map

cc via email: Mr. Earl Barbry, Jr., Tribal Historic Preservation Officer

bc:

JFO CF & RF

ES RF

DWinters

AMcCartney

ES020: JMSullivan:09/06/11:601-977-5400:Lafourche.T.14 S.R.18E.Sec.19.EOI 1493.NA.Ltr



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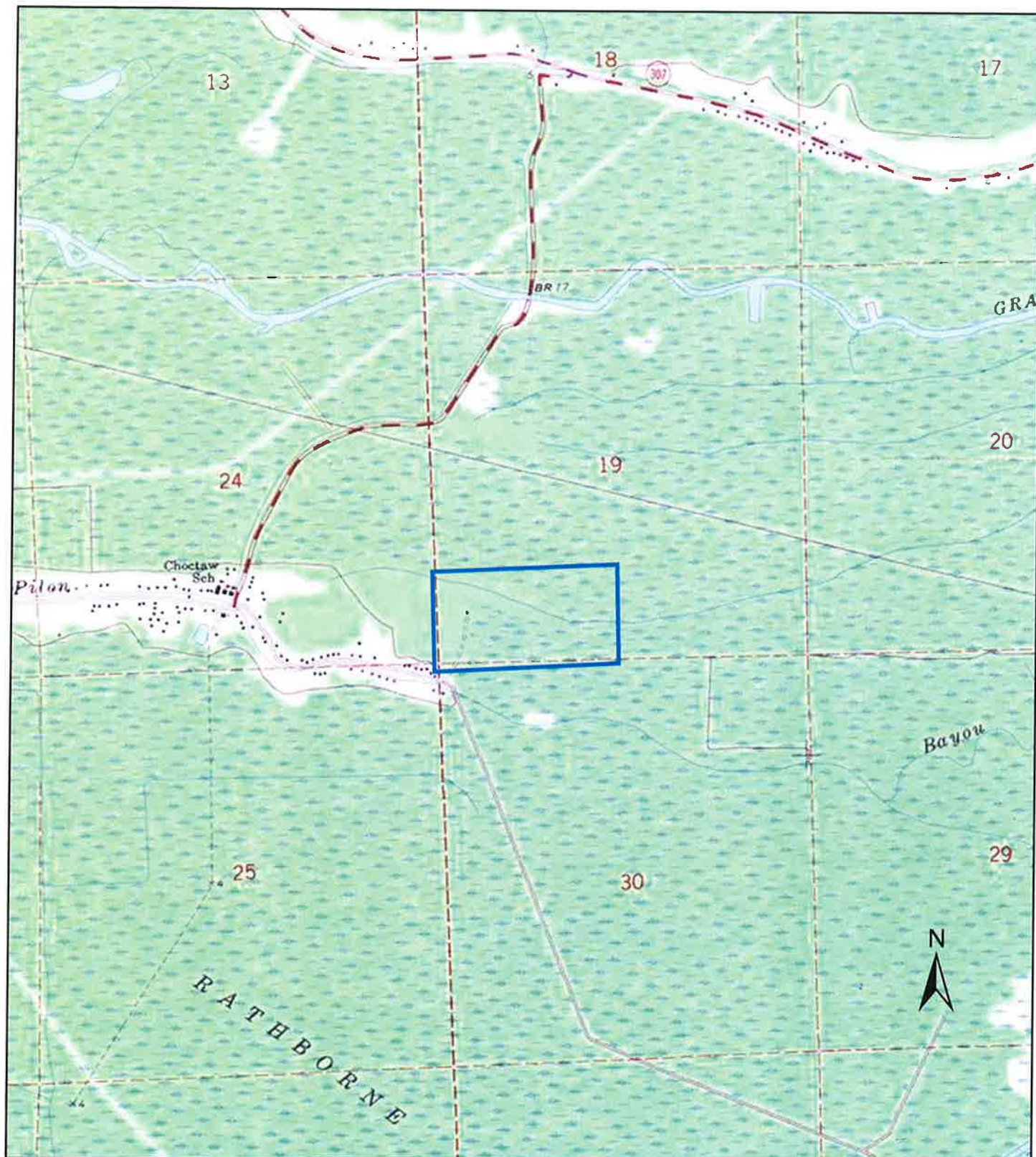
Original to:	cc: to these:
Mr. Earl Barbry, Sr., Chairman Tunica-Biloxi Tribe of Louisiana P.O. Box 331 Marksville, Louisiana 70523	Mr. Earl Barbry, Jr., Tribal Historic Preservation Officer Tunica - Biloxi Tribe 151 Melacon Dr. Marksville, LA 71351 earlii@tunica.org
Oscola Clayton Sylestine, Chairman Alabama-Coushatta Tribe of Texas 571 State Park Road 56 Livingston, TX 77351	Bryant J. Celestine, Historical Preservation Alabama-Coushatta Tribe of Texas 571 State Park Road 56 Livingston, TX 77351 celestine.bryant@actribe.org
Kevin Sickey, Chairman Coushatta Indian Tribe P.O. Box 818 Elton, LA 70532	Linda Langley, Cultural/Historic Preservation P.O. Box 818 Elton, LA 70532 llangley@mcneese.edu
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B. Cheryl Smith, Chief Jena Band of Choctaw P.O. Box 2717 Jena LA 71342	Dana Masters, Tribal Council and Cultural Preservation Officer Jena Band of Choctaw P.O. Box 2717 Jena LA 71342 danammasters@aol.com
Leonard Harjo, Principal Chief Seminole Nation of Oklahoma P.O. Box 1498 Wewoka, Oklahoma 74884	Natalie Deer, Cultural Preservation Office P.O. Box 1768 Seminole, OK 74868-1768 ndeere@seminolenation.com



<u>Original to:</u>	<u>cc: to these:</u>
Beasley Denson, Miko Mississippi Band of Choctaw Indians P.O. Box 6010 Philadelphia, MS 39350	Mr. Ken Carleton, Cultural/Historic Preservation Office Mississippi Band of Choctaw Indians P.O. Box 6257 Philadelphia, MS 39350 kcarleton@choctaw.org
George Scott, Mekko Thlopthlocco Tribal Town P.O. Box 188 Okemah, Oklahoma 74859	Charles Coleman, Cultural/Historic Preservation Office P.O. Box 188 Okemah, Oklahoma 74859 chascoleman@prodgy.net



Proposed Federal Oil and Gas Lease
EOI 1493



 Proposed Lease Area

Proposed Lease Area:
Lafourche Parish, Louisiana, Louisiana Meridian
T. 14S., R. 18E., Sec. 19, S1/2SW1/4
Approximately 75.48 acres.

U.S. Department of the Interior
Bureau of Land Management
Eastern States, Jackson Field Office
Jackson, Mississippi

This map contains portions of the following USGS 1:24,000 Topographic Quadrangle: Kraemer
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.



United States Department of the Interior
Bureau of Land Management

Eastern States
Southeastern States Field Office
411 Briarwood Drive, Suite 404
Jackson, Mississippi 39206
<http://www.es.blm.gov>



IN REPLY REFER TO: 8100 (020) JMS EOI 1493, Lafourche Parish

Sept. 06, 2011

Ms. Pam Breaux
State Historic Preservation Officer
Louisiana Office of Cultural Development
P.O. Box 44247
Baton Rouge, LA 70804-44247

Dear Ms. Breaux:

The Bureau of Land Management (BLM) has received an Expression of Interest (EOI 1493) to lease federal minerals under privately owned surface, i.e. split-estate minerals. The Bureau's Reasonably Foreseeable Development Scenario for this proposed lease is one well from one well pad to be constructed on private surface with no more than 3.5 acres total, access road and pads, to be disturbed accessing federal minerals. The legal locations of the approximately 75.48 acres of federal mineral tracts are as follows (map enclosed):

Louisiana Meridian
Lafourche Parish (Kraemer Quadrangle)
T. 14 S., R.18 E., Sec. 19, S1/2SW1/4 (75.48 acres).

A review of the Louisiana Division of Archaeology site files shows no sites within one mile of the proposed lease sale. Development locations have not been determined on a site-specific basis. Specific locations proposed for development are determined by the developer and surface owners. The BLM's surface responsibilities rest only within the boundaries of any proposed development.

The lease document will state that before the BLM approves any development proposal, a cultural resources survey that meets current professional standards and a report that meets Louisiana Division of Archaeology requirements will be required on a site-specific basis.



WILD HORSES & BURROS • CADASTRAL SURVEY • GENERAL LAND OFFICE RECORDS • MINERALS • RENEWABLE RESOURCES



The report must be approved by both the Louisiana Division of Archaeology and the BLM before any ground disturbing activities take place. Any needed consultation will be concluded before ground-disturbing activities begin.

Your concurrence of these procedures for Section 106 compliance is requested in 30 days. If you have any questions or concerns, please contact John M. Sullivan, Archeologist, at (601) 977-5439 or email at John_M_Sullivan@BLM.Gov.

Sincerely,
Original Signed
Duane Winters

Duane Winters
Assistant Field Manager
Division of Lands and Renewable Resources

Enclosure
1 Map

bc:

JFO CF & RF

ES RF

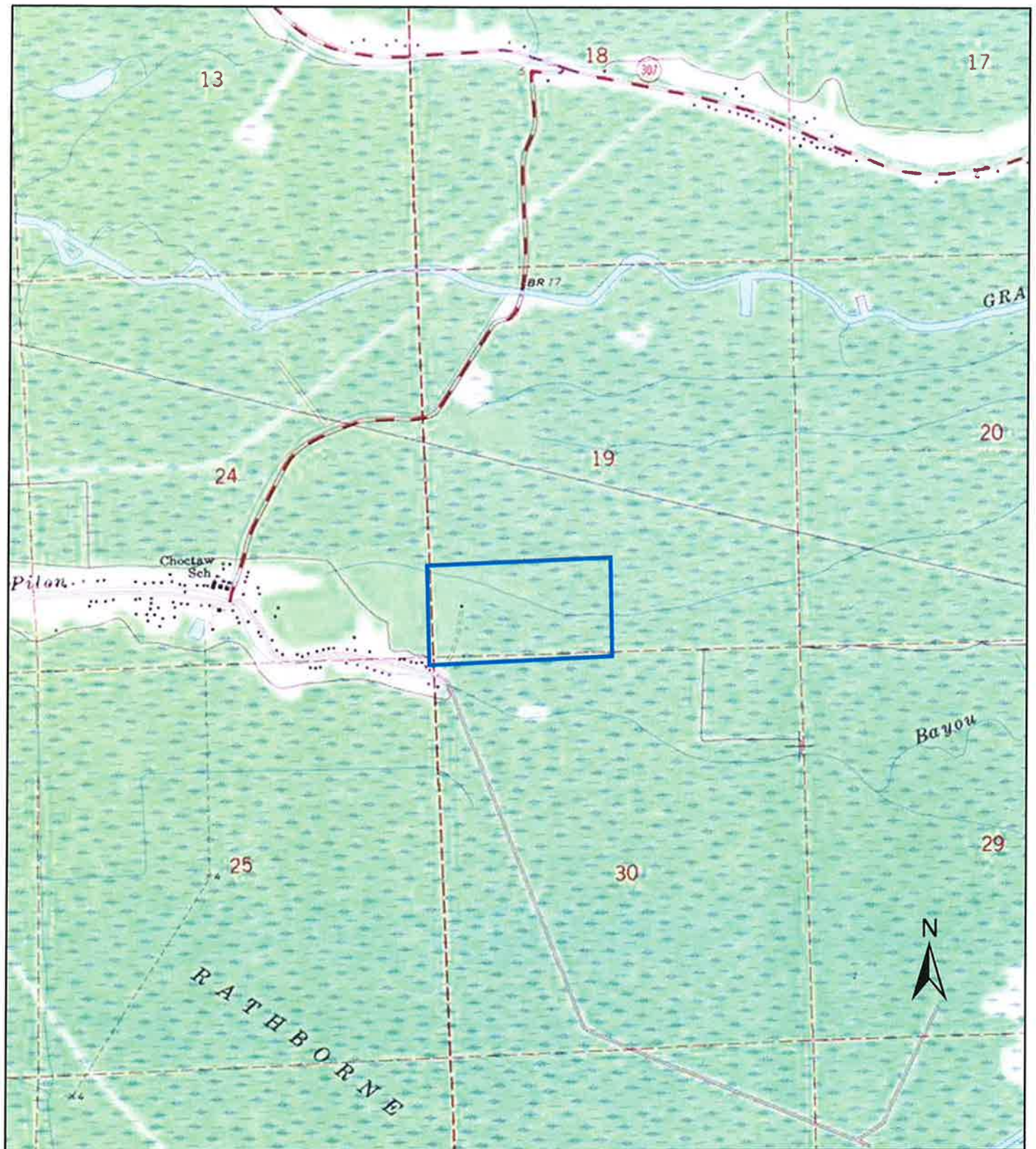
DWinters

~~AMcCartney~~

ES020: JMSullivan:09/06/11:601-977-5400:Lafourche.T.14 S.R.18E.Sec.19.EOI 1493.SHPO.Ltr



**Proposed Federal Oil and Gas Lease
EOI 1493**



 Proposed Lease Area

Proposed Lease Area:
Lafourche Parish, Louisiana, Louisiana Meridian
T. 14S., R. 18E., Sec.19, S1/2SW1/4
Approximately 75.48 acres.

**U.S. Department of the Interior
Bureau of Land Management
Eastern States, Jackson Field Office
Jackson, Mississippi**

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Appendix D

Reasonably Foreseeable Development Scenario

REASONABLY FORESEEABLE DEVELOPMENT SCENARIO

Case File Number: EOI 1493

Project Number: DOI-BLM-ES-0020-2011-0058-EA

Acres: 75.48

Location: LA, Lafourche Parish, Louisiana Meridian, T14S, R18E, Sec. 19, S2SW

I. Reasonably Foreseeable Development

A. RFD Baseline Scenario Assumptions and Discussion

Objective is Miocene Sands at 12-13,000'. Commodity is natural gas and gas condensate.

Federal acreage will be incorporated into a state determined drilling unit or voluntary unit of variable size. Project 1 well drilled from 1 pad.

A 30' wide well access road will be constructed consisting of a 16' wide travel surface with a 7' buffer on each side.

If productive, multiple wells may be drilled from the existing pad.

If productive, oil and gas handling and production facilities will be constructed on the existing pad.

If productive, the reserve pit and part of the drill pad will be reclaimed when drilling and completion activities are concluded.

All disturbed acreage will be reclaimed if the well is non-productive.

B. Surface Disturbance Due to Oil and Gas Activity

Access Road: 0.69 acres (1000'X30')

Well Pad & Pit: 2.81 acres (350'X350')

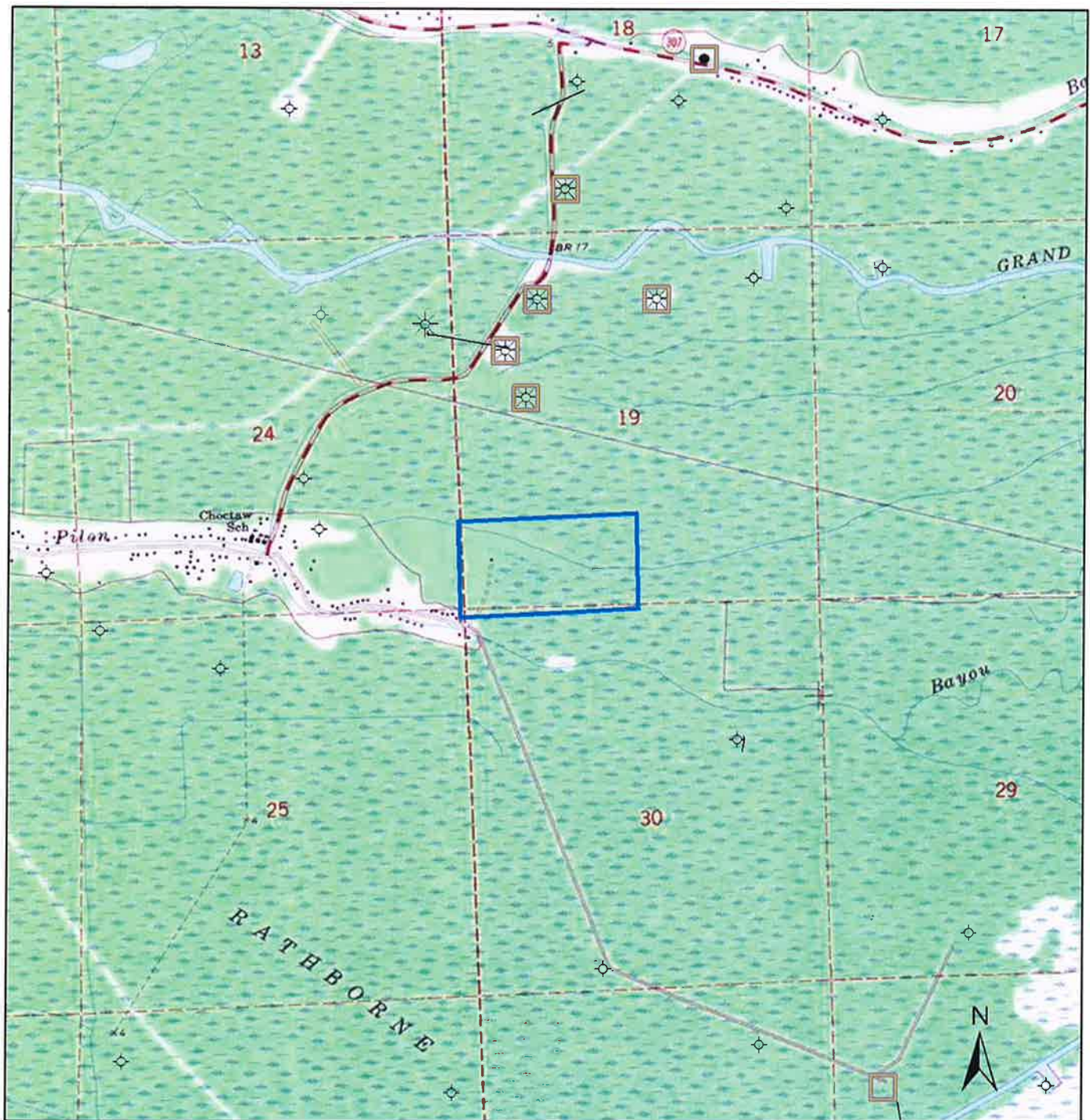
Utility and/or Pipeline R.O.W: 0 – Use access road ROW

Initial Disturbance: 3.5 acres

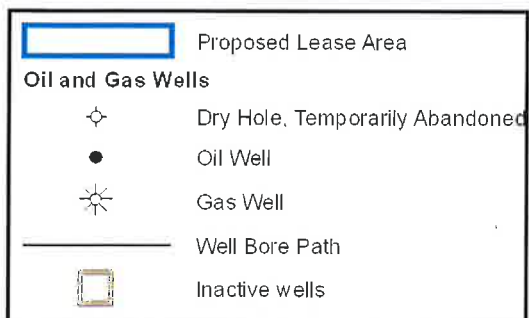
Partial Reclamation of Drill Site: .4 acres

Net Disturbance for Productive Well: 3.1 acres

Proposed Federal Oil and Gas Lease
EOI 1493



2,000 1,000 0 2,000 4,000 6,000 Feet



Proposed Lease Area:
Lafourche Parish, Louisiana, Louisiana Meridian
T. 14S., R. 18E., Sec. 19, S1/2SW1/4
Approximately 75.48 acres.

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Bureau of Land Management
Eastern States, Jackson Field Office
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APPENDIX E

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